REMARKS

Claims 1-23 have been examined. New claim 24 has been added to further describe the

patentable features of the present invention.

Applicants thank the Examiner for indicating that claims 6-13[1] are allowed and that

claims 3 and 4 are objected to as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form included all the limitations of independent claim

claims 1. Claims 3 and 11 have been rewritten into independent form. Therefore, Applicants

submit that claims 3, 4 and 6-13 should be in a condition for allowance.

I.   Claims Objections

Claim 20 is objected to because "multiples" should be --multiplex--. Applicants

respectfully request the Examiner to withdraw this objection based on the claim amendments

made herein.

II.   Claim Rejections - 35 U.S.C. § 102

Claims 1-2, 5 and 14-23 are rejected under 35 U.S.C. § 102(e) as allegedly being

anticipated by Dantu et al. (US 7,167,443). Applicants traverse the rejection as follows.

A.   Claim 1

The present invention relates to establishing a restoration path in a <u>transport network</u>

(e.g., SDH, SONET or OTN) by redirecting traffic of a failed physical link or logical path over a

spare resource (see pg. 1-2 of Applicants' specification). More particularly, an exemplary

embodiment of the present invention relates to <u>circuit switched</u> TDM technology such as

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[1] Applicants note that claims 11 and 12 are dependent on rejected independent claim 1, but maintain that
claims 11 and 12 contain allowable subject matter as indicated by the Examiner.

SDH/SONET and adds <u>label switching</u> to this transport technology. For example, SDH/SONET

has a fixed multiplex structure of virtual containers (also known as virtual tributaries in the

SONET terminology) in each frame that does not change from one frame to another. These

virtual containers are (TDM-) multiplex units that are used to define and establish end-to-end

paths in the transport network. These <u>multiplex units can carry any type of traffic</u> (such as

multiprotocol label switching (MPLS)). Thus, <u>a label (or path tag) is assigned to these multiplex</u>

<u>units</u> (not to the MPLS packets inside the payload, for example) and creates a new

crossconnection when a new label is detected. This uniquely introduces a flexibility into <u>circuit</u>

<u>switched transport networks.</u>

     In particular, claim 1, as amended, recites:

          A method of establishing a path through a transport network, said network
comprising a number of physically interconnected network elements (NEn-1,
NEn, NEn-1); transmission signals being transported over physical connections
between said network elements; each transmission signal being subdivided into
frames of the same length, <u>said frames being structured according to a multiplex</u>
<u>hierarchy into multiplex units respectively representing paths through said</u>
<u>network and repeating every frame thereby forming traffic streams multiplexed to</u>
<u>form said transmission signals;</u> said method comprising the steps of:
-    assigning each traffic stream an identifier called hereinafter a path tag
which is sent in said traffic stream on a regular basis;
-    providing forwarding information (FT) in each network element along
said path to be established;
-    receiving (a1) a new traffic stream at an input port (I1) of a network
element (NEn);
-    checking (a2) the path tag of the received traffic stream and determining
(a3) an appropriate output port (O2) based on said path tag and the forwarding
information (FT); and
-    establishing (a4) an internal cross-connection between said input port (I1)
and said previously determined output port (O2),
<u>wherein the assigning each traffic stream the path tag includes assigning a</u>
<u>multiplex unit in a corresponding traffic stream the path tag to be sent in the</u>
<u>traffic stream with the multiplex unit, each multiplex unit represents the</u>
<u>corresponding traffic stream such that a sequence of identical multiplex units</u>
<u>transmitted along a same path form the corresponding traffic stream.</u> (emphasis
added)

Dantu does not disclose that a label (or path tag) is assigned to the multiplex units. Instead, Dantu discloses that the node 600 adds a label to create data packet 612 (col. 14, lines 46-65). In other words, Dantu merely discloses assigning labels to the MPLS packets inside the payload, not to the multiplex unit. Thus, a label switching router in Dantu has to look to the packets inside the payload that carries the labels (col. 15, lines 6-17 and col. 16, line 61 to col. 17, line 11). For example, when MPLS is carried over SONET, the MPLS labels (i.e., packet labels) are inside the payload section and are not visible to the transport layer. Therefore, the server layer connection transporting the MPLS traffic are necessarily static and do not change with the labels. Assigning a label to a packet, as taught in Dantu, is not equivalent to assigning a path tag to the traffic stream, and more particularly, to the multiplex unit.

Also, since the multiplex unit of claim 1 is repeated every frame to form the traffic stream and the multiplex unit is assigned a path tag which is sent in the traffic stream with the multiplex unit on a regular basis, a path tag that is assigned to a certain multiplex unit repeats every multiplex unit, and thus, regularly. That is, a path tag is sent regularly in the traffic stream according to claim 1. On the other hand, Dantu relies on packet switching technology in which a label is assigned to a packet. Packets have no firm repetition frequency and have no fixed relationship with each other. Thus, a label that is assigned to a packet does not repeat regularly because packets themselves do not repeat regularly. Thus, Dantu does not and cannot disclose each and every feature of claim 1 in order to support the rejection.

In view of the above, Applicants submit that claim 1 is patentable for at least these reasons.

B.   Claims 2, 5 and 14-23

Applicants submit that claims 2, 5 and 14-23 are patentable at least by virtue of their

dependency upon claim 1.

III.   New Claims

By this Amendment, Applicants have added new claim 24 to further define the claimed

invention. Applicants respectfully submit claim 24 recite additional features which are not

taught or suggested by the prior art of record.

IV.   Conclusion

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

Ryan F. Heavener
Registration No. 61,512

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
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